What is claimed is

1. An isolated polypeptide comprising the amino acid sequence

Y (Trp/Phe) Xaa_1 Xaa_2 Xaa_3 Xaa_4 Xaa_5 (Trp/Phe) Xaa_6 Xaa_7 (Trp/Phe) Z, wherein:

Y, which may or may not be present, is a peptidic structure containing at least one cysteine residue and having the formula $(Xaa)_n$, wherein Xaa is any amino acid residue and n is an integer from 1 to 20;

Z, which may or may not be present, is a peptidic structure containing at least one cysteine residue and having the formula $(Xaa)_n$, wherein Xaa is any amino acid residue and n is an integer from 1 to 20;

Xaa_1 is any amino acid;

Xaa_2 is any amino acid;

Xaa_3 is any amino acid;

Xaa_4 is any amino acid;

Xaa_5 is any amino acid;

Xaa_6 is any amino acid; and

Xaa_7 is any amino acid;

wherein at least two of the amino acid residues of Xaa_1 through Xaa_5 are positively charged.

2. An isolated polypeptide comprising the amino acid sequence

Y (Trp/Phe) Xaa_1 Xaa_2 Xaa_3 Xaa_4 Xaa_5 (Trp/Phe) Xaa_6 Xaa_7 Xaa_8(Trp/Phe) Z, wherein:

Y, which may or may not be present, is a peptidic structure containing at least one cysteine residue and having the formula $(Xaa)_n$, wherein Xaa is any amino acid residue and n is an integer from 1 to 20;

Z, which may or may not be present, is a peptidic structure containing at least one cysteine residue and having the formula $(Xaa)_n$, wherein Xaa is any amino acid residue and n is an integer from 1 to 20;

wherein Xaa_1 is any amino acid;

Xaa_2 is any amino acid;

Xaa_3 is any amino acid;

Xaa_4 is any amino acid;

Xaa_5 is any amino acid;

Xaa_6 is any amino acid;

Xaa_7 is any amino acid; and

Xaa_8 is any amino acid;

wherein at least two of the amino acid residues of Xaa_1 through Xaa_5 are positively charged.

3. The isolated polypeptide of claim 1 or 2, wherein the cysteine in the Y peptidic structure and the cysteine in the Z peptidic structure are intramolecularly cross linked via a disulfide bond.

4. The isolated polypeptide of claims 1 or 2, wherein none of the amino acid residues of X_1 through X_5 are negatively charged.

5. The isolated polypeptide of claims 1 or 2, wherein n is an integer from 1 to 15.

6. The isolated polypeptide of claims 1 or 2, wherein n is an integer from 1 to 10.

7. The isolated polypeptide of claims 1 or 2, wherein n is an integer from 1 to 5.

8. The isolated polypeptide of claims 1 or 2, wherein n is an integer from 1 to 3.

9. An isolated polypeptide selected from the group consisting of:

a) a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2, 3, 4, 5 or 6; and

b) a polypeptide consisting of the amino acid sequence of SEQ ID NO:2, 3, 4, 5 or 6.

10. The polypeptide of claims 1, 2 or 9, wherein the polypeptide binds to the amyloid form of the Aβ peptide.

11. The polypeptide of claims 1, 2 or 9, further comprising a therapeutic or diagnostic compound conjugated to the polypeptide.

12. A composition useful for treating or diagnosing Alzheimer's disease in a mammal comprising a pharmaceutically or diagnostically acceptable carrier and a therapeutically- or diagnostically-effective amount of a polypeptide as claimed in claims 1, 2 or 9.

13. A method of treating or diagnosing Alzheimer's disease in a mammal in need of such treatment, which comprises administering to the mammal a therapeutically- or diagnostically-effective amount of a composition as claimed in claim 12.

14. An isolated nucleic acid sequence encoding the

polypeptide of claims 1, 2 or 9.

15. A vector comprising the nucleic acid sequence of claim 14.

16. The vector of claim 15, wherein the vector is an expression vector.

17. A host cell comprising the vector of claim 16.

18. The host cell of claim 17, wherein the host cell is a eukaryotic cell.

19. A hybrid molecule comprising:

a) a peptide set forth in claim 1, 2 or 9, that specifically interacts with the amyloid form of the Aβ peptide; and

b) a scaffold molecule comprising a diagnostic or therapeutic reagent.

20. The hybrid molecule of claim 19, wherein the diagnostic or therapeutic reagent comprises a polypeptide, small molecule or compound.

21. The hybrid molecule of claim 20, wherein the polypeptide comprises all or a sufficient portion of a protein selected from the group consisting of antibodies, enzymes, chromogenic proteins, fluorescent proteins and fragments thereof.

22. The hybrid molecule of claim 20, wherein the

therapeutic agent is a neuroprotective agent that renders amyloid plaques less toxic or inhibits plaque formation.

23. The hybrid molecule of claim 20, wherein the diagnostic reagent specifically images amyloid plaques in neuronal tissue.

24. A method of treating or diagnosing a neurodegenerative disease associated with aberrant plaque formation, the method comprising administering a hybrid molecule of claim 20 to a subject having, or predisposed to having, the disease.

25. The method as in claim 19, wherein said peptide binds specifically to the amyloid form of the $A\beta_{1-40}$ peptide in plaques of Alzheimer's patients.

26. An anti-idiotype antibody that specifically binds to a polypeptide of claim 1, 2 or 9.